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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/580,874	05/30/2000	Michel Ladang	192592USONPP-CONT	1709

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EXAMINER

GOFF II, JOHN L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 04/24/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-9

Office Action Summary

Application No.

09/580,874

Applicant(s)

LADANG ET AL.

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-8, drawn to a process for preparing a crosslinked polyolefin foam, classified in class 264, subclass 45.8.
 - II. Claim 9, drawn to a compliant crosslinked foam, classified in class 428, subclass 158.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made from a materially different process such as one with multidirectional expansion.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Tom Barnes on 4/11/02 a provisional election was made with traverse to prosecute the invention of I, claims 1-8. Affirmation of this election must be made by applicant in replying to this Office action. Claim 9 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. Upon the indication of allowable subject matter, rejoinder will be considered.

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5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

6. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)).

Information Disclosure Statement

7. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

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Claim Objections

8. Claims 7 and 8 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: A polyolefin foam composition is mixed with a crosslinking agent. The product is placed between two sheets of glass fabric. The combination is heated, and the foam composition undergoes unidirectional expansion in its thickness.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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13. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hitchcock (U.S. Patent 5,087,395).

Hitchcock is directed to the continuous expansion of a sheet of polyolefin foam carried out by first radiation crosslinking one or both surfaces of the foam product before expansion (Column 2, lines 55-68 and column 3, lines 1-59). Hitchcock teaches that the surfaces of the sheet are first crosslinked offline, the crosslinked surfaces being perpendicular to the direction of expansion. The cross-linkable sheet is continuously conveyed to a preheat chamber and exposed to a heating means. The heated sheet then passes into a foaming chamber that is at a suitable heat-foaming temperature, and the sheet undergoes unidirectional expansion in its thickness to form a foamed sheet.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hitchcock as applied to claims 1-3 and 6 above, and further in view of Hooper et al.

Hitchcock teaches all of the limitations in claim 4 except for a teaching on adhering a facing material (support) to one or both faces of the foam product prior to expansion. Hooper et al are directed to the continuous, unidirectional expansion of a sheet of plastic foam carried out by first adhering a facing material to one or both faces of the foam product perpendicular to the

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direction of the expansion (Column 4, lines 36-50 and 56-66 and Figure 1). Hooper et al teach a bottom facing sheet material paid out and supported along a bottom conveyor. A plastic foam composition mixed with a crosslinking agent is dispensed on the upwardly facing surface of the bottom facing sheet. An upper facing sheet may then be paid out onto the upper surface of the plastic foam. A chemical reaction is effected causing the foam to expand in its thickness. It would have been an obvious alternative to one of ordinary skill in the art at the time the invention was made to adhere facing material to the foam product prior to expansion as taught by Hooper et al rather than surface crosslinking the product as taught by Hitchcock to promote unidirectional expansion when a facing material is required as part of the final product.

16. Claims 1-4 and 6 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Hooper et al (U.S. Patent 4,756,860) in view of Hitchcock (U.S. Patent 5,087,395).

Hooper et al are directed to the continuous, unidirectional expansion of a sheet of plastic foam carried out by first adhering a facing material to one or both faces of the foam product perpendicular to the direction of the expansion (Column 4, lines 36-50 and 56-66 and Figure 1). Hooper et al teach a bottom facing sheet material paid out and supported along a bottom conveyor. A plastic foam composition mixed with a crosslinking agent is dispensed on the upwardly facing surface of the bottom facing sheet. An upper facing sheet may then be paid out onto the upper surface of the plastic foam. A chemical reaction is effected causing the foam to expand in its thickness. Hooper et al teach that the process is continuous. Hooper et al are silent as to the type of plastic foam expanded.

Hitchcock is directed to the continuous expansion of a sheet of polyolefin foam carried out by first radiation crosslinking one or both surfaces of the foam product (Column 2, lines 55-

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68 and column 3, lines 1-59). The surfaces of the sheet are crosslinked offline. The cross-linkable sheet is continuously conveyed to a preheat chamber and exposed to a heating means. The heated sheet then passes into a foaming chamber that is at a suitable heat-foaming temperature, and the sheet is expanded in its thickness to form a foamed sheet.

Regarding claim 1, one skilled in the art at the time the invention was made would have readily appreciated that the type of plastic foam used in the continuous, unidirectional expansion method taught by Hooper et al would have included olefin polymer foam as shown by Hitchcock.

Regarding claim 6, Hooper et al teach carrying out the unidirectional expansion by first adhering a facing material to one or both faces of the foam product perpendicular to the direction of the expansion. Hooper et al further teach that the facing material is not required to be permanent. Therefore, it would have been an obvious alternative to one of ordinary skill in the art at the time the invention was made to use the surface crosslinking method taught by Hitchcock to promote unidirectional expansion when a facing material is not required as part of the final product to reduce production cost.

17. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hitchcock in view of Hooper et al as applied in paragraphs 13 and 15 above and also over Hooper et al in view of Hitchcock as applied in paragraph 16 above, and both combinations further in view of Bertsch (U.S. Patent 4,180,427).

Hooper et al and Hitchcock teach all of the limitations in claim 5 except for a teaching on a corona discharge operation prior to adhering a facing material (support) to the foam product. Bertsch is directed to applying a sheet of covering material to a sheet of thermoplastic material

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before foaming. Bertsch teaches a corona discharge directed against the surface of the foam product before applying the covering material to burn away any impurities (Column 2, lines 15-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to surface treat the foam product with a corona discharge operation as taught by Bertsch to ensure all impurities are removed before applying the facing material as shown in Hooper et al.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-F (8:00 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John L. Goff
April 19, 2002



Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700